

ABSTRACT OF THE DISCLOSURE

SYSTEM AND METHOD FOR INCREASING UPSTREAM 5 COMMUNICATION EFFICIENCY IN AN OPTICAL NETWORK

An optical transmitter of a subscriber optical interface and an optical receiver of a laser transceiver node can be designed to a frequency of data that is formatted according to a predetermined network protocol, that is encoded with a
10 predetermined coding scheme, and that is transmitted according to a predetermined data transmit timing scheme. The frequency of data is an occupied frequency of a protocol when the data comprises a maximum number of like bits permitted by the protocol. An optical transmitter and optical receiver can be designed to a lowest occupied frequency of data that is encoded with 8B/10B
15 encoding, and that is propagated upstream according to time division multiple access (TDMA). In this way, upstream optical communications can be maximized for speed.